

IFO AUDIT GUIDE

Fire Protection

TABLE OF REFERENCES

Document Number	Title
NPR 8715.3	NASA Safety Manual
NASA-STD-8719.11	Safety Standard For Fire Protection

<i>Fire Protection</i>			
ATTRIBUTE	SOURCE	SAT/ UNSAT	REMARK/COMMENT
A. Management			
1. Has a comprehensive fire safety program been implemented at the Center?	NPR 8715.3, Para. 9.3		
2. Have emergency action plans and fire protection program plans been developed?	NASA-STD-8719.11, Para. 2.k		
3. How is it ensured that fire safety requirements imposed by local, State, or Federal agencies are adhered to if they are more stringent than NASA requirements? a. How is it ensured that the most current requirements are adhered to? b. How are changes to local, State, or Federal requirements learned of, reviewed, and implemented?	NPR 8715.3, Para. 9.3.4; NASA-STD-8719.11, Para. 2.m		
4. Has the Authority Having Jurisdiction (AHJ) for NASA fire protection been appointed in writing? a. Who is the AHJ? b. Are they a safety or fire protection professional with requisite skills and knowledge? c. Are criteria and/or qualifications established for the position?	NPR 8715.3, Para. 9.4.2; NASA-STD-8719.11, Para. 2.l		
5. Does the Center fire and safety organization review and approve all project design criteria and conceptual plans and design documents with life safety and/or fire protection/prevention implications? a. How is this ensured? b. Who determines which plans have life safety and/or fire protection/prevention implications?	NPR 8715.3, Para. 9.4.3; NASA-STD-8719.11, Para. 2.o		

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6. Is there evidence that all contract documents are reviewed for fire protection specifications?	NASA-STD-8719.11, Para. 2.p		
B. Training 1. Is there a Fire Safety Education Program? a. Do new employees receive an introduction to emergency systems? b. Does indoctrination training include: (1) How to activate the emergency services system (2) How to operate of fixed system, (3) Familiarization with the evacuation plan for the building and the facility? (4) Awareness of emergency signals? (5) Hazard recognition and reporting? (6) The use of portable fire suppression equipment? c. Are personnel required to use fire extinguishers instructed in their use? d. Are training records maintained?	NASA-STD-8719.11, Paras. 10.5.2, 10.5.3		
2. Is fire safety training provided for NASA employees? a. Is it provided for contractors?	NPR 8715.3, Para. 9.9		
3. Are fire drills conducted annually in all facilities occupied by 10 or more persons? a. Are they evaluated by persons knowledgeable in fire and life safety? a. Are these drills and evaluations documented?	NASA-STD-8719.11, Para. 10.5.1		

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C. Fire Service Operations 1. Is there a firefighting organization established at the Center? a. Does it meet NFPA recommendations and OSHA regulations? b. Have response times to various facility locations been established?	NPR 8715.3, Para. 9.7; NASA-STD-8719.11, Para. 11.9		
2. If there is not a firefighting organization at the Center, is an agreed-upon arrangement with an external organization for providing fire protection documented and retained on file?	NPR 8715.3, Para. 9.7,		
3. Have civil service or contracted fire departments developed and implemented a written Fire Service Operations Plan that ensures compliance with NFPA, OSHA, FAA, and NASA requirements?	NASA-STD-8719.11, Para. 11.4		
4. How is it ensured that the NASA Center Fire Department functions properly? a. Are drills or exercises performed?	NASA-STD-8719.11, Para. 2.i, 11.1		
5. Has a Prefire Plan Program been implemented? a. Have facility pre-fire plans been developed? b. Have aircraft pre-fire plans been developed?	NASA-STD-8719.11, Para. 11.10		
D. Fire Protection Equipment and Systems 1. Have appropriate automatic fire detection and suppression systems been provided for all facilities containing significant hazards, mission essential equipment, or permanently housed personnel?	NPR 8715.3, Para. 9.3.1		

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<p>2. How is it ensured that fire extinguishing systems comply with the National Fire Protection (NFPA) codes and standards?</p> <p>a. Is all fire protection equipment Underwriter Laboratories (UL) listed or Factory Mutual (FM) approved?</p>	NPR 8715.3, Para. 9.6.2		
<p>3. Have maintenance programs been established for fire protection equipment and systems?</p> <p>a. Is maintenance performed in accordance with NFPA policies?</p> <p>b. What system has been established to ensure maintenance actions are performed as required?</p> <p>a. Are maintenance records maintained?</p>	NASA-STD-8719.11, Para. 2.f, Chapter 4, Chapter 7		
<p>4. Are fire suppression systems and equipment periodically tested to ensure proper operation?</p> <p>a. Are test periodicities in compliance with NFPA policies?</p> <p>b. What system has been developed to ensure that systems are tested as required?</p> <p>c. Are test records maintained?</p>	NASA-STD-8719.11, Chapter 4, Chapter 7		
<p>5. Is there a life cycle review and replacement program for fire suppression and protection equipment?</p> <p>a. Is it documented?</p>	NASA-STD-8719.11, Para. 2.g		

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6. Are fire alarm systems provided for required facilities? <ul style="list-style-type: none"> a. Do they perform required functions? b. Are they tested prior to acceptance? c. Are they audible in all areas? d. Are interior fire alarm systems equipped with annunciators near the building entrance to indicate the location of the fire to responding personnel? e. Are fire alarm systems monitored by the central fire alarm monitoring system? 	NASA-STD-8719.11, Sect. 8.3		
7. Are fire protection systems inspection reports maintained for at least 5 years?	NASA-STD-8719.11, Sect. 10.2.1.b		
8. When a fire protection system is removed from service for more than four hours, is the AHJ and fire department notified? <ul style="list-style-type: none"> a. Is an approved fire protection system impairment plan implemented? 	NASA-STD-8719.11, Paras. 7.17, 8.5		
E. Fire Prevention <ul style="list-style-type: none"> 1. Does the Center have a Fire Prevention Program? <ul style="list-style-type: none"> a. What fire prevention techniques are applied? b. Is it evident that safety awareness of NASA and contractor personnel is heightened as a result of the program? 	NASA-STD-8719.11, Para. 10.1		

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2. Are annual facility surveys/risk analyses performed to identify fire safety hazards and deficiencies? <ul style="list-style-type: none"> a. Are all hazards eliminated, relocated, isolated, or protected? a. Are these surveys/analyses documented? b. How are deficiencies reported and tracked to ensure they are corrected and prevented? 	NPR 8715.3, Para. 9.5, NASA-STD-8719.11, Paras. 2.a, 2.b, 3.3.1		
3. Are housekeeping requirements followed to help prevent fires?	NASA-STD-8719.11, Para. 10.6		
4. Are fire prevention inspections conducted? <ul style="list-style-type: none"> a. Are they conducted by persons trained to recognize fire-related problems? b. Is there a written document developed for each inspection? c. What is the inspection frequency? Are frequencies set by the AHJ? 	NASA-STD-8719.11, Sect. 10.7.1		
5. Are fire prevention inspection reports maintained for at least 2 years?	NASA-STD-8719.11, Sect. 10.2.1.a		
F. Reporting and Investigation <ul style="list-style-type: none"> 1. Is there a documented process for the investigation and reporting of fires? <ul style="list-style-type: none"> a. Has a person been designated by the AHJ who is responsible for investigation of all fires? 	NASA-STD-8719.11, Para. 2.j, 10.3.1		

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2. Are fire-related mishaps reported in accordance with NPD 8621.1, NASA Mishap Reporting and Investigating Policy? a. Are all fires reported via the Incident Reporting Information System (IRIS) to the facilities emergency operations center and to NASA Headquarters? b. Are there recent examples?	NPR 8715.3, Paras. 9.10; NASA-STD-8719.11, Para. 10.2.2		
3. Are fire (incident) reports maintained indefinitely?	NASA-STD-8719.11, Sect. 10.2.1.c		
4. Are fire investigation reports maintained indefinitely?	NASA-STD-8719.11, Sect. 10.2.1.d		
5. Are fire reports included in a lessons learned system?			